Amendments to the Specification

Please amend the specification as follows.

Please amend the paragraph between the title and the heading "BACKGROUND OF THE INVENTION":

This application is a continuation of Serial No. ~~10,000,957,~~ 10/000,957 filed December 4, 2001, now abandoned, which is a continuation of International Application Serial No. PCT/EP/00/04869, filed May 29, 2000.

Please amend paragraph [0006], at page 2, as follows:

[0006] Different methods of analyte determination in the evanescent field of lightwaves guided in optical film (stratified) waveguides can be distinguished. Based on the applied measurement principle, for example, it can be distinguished between fluorescence, or more general luminescence methods, on one side and refractive methods on the other side. In this context, methods for generation of surface plasmon renonance in a thin metal layer on a dielectric layer of lower refractive index can be included in the group of refractive methods, if the resonance angle of the launched excitation light for generation of the surface plasmon resonance is taken as the quantity to be measured. Surface plasmon resonance can also be used for the amplification of a luminescence or the improvement of the signal-to-background ratios in a luminescence measurement. The conditions for generation of a surface plasmon resonance and the combination with luminescence measurements, as well as with waveguiding structures, are described in the literature, ~~for example~~ for example, in US patents US 5,478,755, US 5,841,143, US 5,006,716, and US 4,649,280.

Please amend paragraph [0019], at pages 5-6, as follows:

[0019] Other arrangements are known, wherein a luminescence amplification is supposed to occur without a direct incoupling of excitation light, but mediated by near-field effects upon excitation of luminescent molecules at or near to (i.e., in a distance of up to some hundred nanometers) the surface of a waveguide. For example, in ~~US-patent~~ US patent No. 4,649,280 a multilayer system with a conductive and reflective material (for example silver) on a substrate, a

dielectric optical waveguide (for example of lithium fluoride with refractive index of only 1.39) and a film of molecules capable of fluoresce deposited thereon, is described. In a further development, in US-patent No. 5,006,716, it is additionally proposed to produce the conductive film in the form of a surface relief grating, which form is reproduced in the course of the deposition process for manufacture of the final structure up to the surface. It is described as an advantage of this ~~arrangement;~~ arrangement that luminescence light coupled into the waveguiding layer could be outcoupled by the grating into discrete spatial directions, corresponding to the outcoupled diffraction orders and the modes guided in the waveguide, thus allowing for collecting a larger fraction of the luminescence by a detector, if it were positioned in the direction of the outcoupled luminescence light. An essential part of these arrangements with a waveguiding layer of relatively low refractive index, however, is the existence of a reflecting metal layer located underneath.

Please amend paragraph [0022], at page 7, as follows:

[0022] A disadvantage of all methods for the detection of evanescently excited luminescence described as the state of the art, especially in the specifications WO 95/33197 and WO 95/33198, is that in all cases only one sample can be analyzed on the waveguiding layer of the sensor platform, which layer is formed as a homogeneous film. In order to perform further measurements on the same sensor platform, tedious washing or cleaning steps are continuously required. This holds especially ~~true;~~ true if an analyte different from the one in the first measurement has to be determined. In case of an immunoassay this means, in general, that the whole immobilized layer on the sensor platform has to be exchanged, or that even a whole new sensor platform has to be used.

Please amend paragraph [0025], at pages 7-8, as follows:

[0025] WO 94/27137 proposes, for example, an apparatus and a method for carrying out immunoassays using evanescently excited fluorescence. The apparatus consists of a continuous optical waveguide having two plane-parallel surfaces and a lateral edge that acts in conjunction with a lens as incoupling element. A plurality of specific binding partners are immobilized on at least one surface. In a preferred embodiment, those specific binding partners are arranged on the continuous

waveguide so that they are physically separate from one another. In the working ~~Example~~ example they are distributed in the form of dots over the surface of the waveguide.

Please amend paragraph [0034], at page 10, as follows:

[0034] Based on simple glass or microscope slides, without additional waveguiding layers, arrays with a very high feature density are known. For example, in ~~US-patent~~ US patent No. 5,445,934 (Affymax Technologies), arrays of oligonucleotides with a density of more than 1000 features on a square centimeter are described and claimed. The excitation and read-out of such arrays is based on classical optical arrangements and methods. The whole array can be illuminated simultaneously, using an expanded excitation light bundle, which, however, results in a relatively low sensitivity, the portion of scattered light being relatively large and scattered light or background fluorescence light from the glass substrate also being generated in those regions where no oligonucleotides for binding of the analyte are immobilized. In order to limit excitation and detection to the regions of immobilized features and to suppress light generation in the adjacent regions, there is widespread use of confocal measurement arrangements, and the different features are analyzed sequentially by scanning. The consequences, however, are an increased amount of time for the read-out of a large array and a relatively complex optical set-up.